BR-193

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.18/BRM/CSR-06/865g/CEMENT/2015-16 Date: 02.06.2015

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer**, J.C. Nagara Sub Division, BBMP, Bangalore.
*AGENCY	:	**Mr. B.R. Manjunath,** No. 486, New BEL Road, Bangalore - 54.
*NAME OF THE WORK	:	Providing sanitary connection to the Public Toilet at Bulleward Park in Ward No. 18, BBMP, Bangalore.
*REFERENCE	:	EE/H/AE/WO/191/2012-13 Dated: 07.11.2012
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	01.06.2015
PERIOD OF TESTING	:	01.06.2015 to 02.06.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	28.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	150 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	470 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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****

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No: CTCE/BBMP/W.No.18/BRM/CSR-06/865g/SAND-Gradation/2015-16 : 02.06.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** J.C. Nagara Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. B.R. Manjunath,**
No. 486, New BEL Road, Bangalore - 54.

*** Name of Work** : Providing sanitary connection to the Public Toilet at Bulleward Park in Ward No. 18, BBMP, Bangalore.

Reference : EE/H/AE/WO/191/2012-13 Dated: 07.11.2012

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 01.06.2015

Date of Testing : 02.06.2015

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	95.50	90-100	90-100	90-100	95-100
2.36	75.80	60-95	75-100	85-100	95-100
1.18	52.00	30-70	55-90	75-100	90-100
600 Micron	23.60	15-34	35-59	60-79	80-100
300 Micron	11.50	5-20	8-30	12-40	15-50
150 Micron	2.90	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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Ref. No. CTCE BBMP/W.No.18/BRM/CSR-06/865g/AGG/GR/2015-16 : 02.06.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer**	: **Asst. Executive Engineer,** J.C. Nagara Sub Division, BBMP, Bangalore.
*** Agency**	: **Mr. B.R. Manjunath,** No. 486, New BEL Road, Bangalore - 54.
*** Name of Work**	: Providing sanitary connection to the Public Toilet at Bulleward Park in Ward No. 18, BBMP, Bangalore.
Reference	: EE/H/AE/WO/191/2012-13 Dated: 07.11.2012
Technical Reference	: IS : 2386 Part 1 -1963 RA-2007
Sample ID	: Coarse Aggregates (40mm)
Sample Received on	: 01.06.2015
Date of Testing	: 02.06.2015

Total Wt. of Aggregates in gms= **5000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.26	95-100	85-100
20	33.54	30-70	0-20
10	14.38	10-35	0-5
4.75	1.34	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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T-2377

Job No.: CTCE/BBMP/W.No 18/BRM/CSR-06/865g/AGG/GR/2015-16 : 02.06.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** J.C. Nagara Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. B.R. Manjunath,**
No. 486, New BEL Road, Bangalore - 54.

*** Name of Work** : Providing sanitary connection to the Public Toilet at Bulleward Park in Ward No. 18, BBMP, Bangalore.

*** Reference** : EE/H/AE/WO/191/2012-13 Dated: 07.11.2012

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (20mm)

Sample Received on : 01.06.2015

Date of Testing : 02.06.2015

Total Wt. of Aggregates in gms= **5000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS :383-1970 (RA- 2007)	
		Graded	Single Sized
40	100	100	100
20	97.44	95-100	85-100
10	30.96	25-55	0-20
4.75	2.84	0-10	0-5

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits

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Job No.: CTCE/BBMP/W.No.18/BRM/CSR-06/865g/Bricks/2015-16 : 05.06.2015

TEST REPORT ON BRICKS

*** Customer** : **Asst. Executive Engineer,** J.C. Nagara Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. B.R. Manjunath,**
No. 486, New BEL Road, Bangalore - 54.

*** Name of the work** : Providing sanitary connection to the Public Toilet at Bulleward Park in Ward No. 18, BBMP, Bangalore.

Reference : EE/H/AE/WO/191/2012-13 Dated: 07.11.2012

Sample ID/Type of Test : Bricks / Water Absorption of Bricks

Technical Reference : IS: 3495(Part-2)- 1992 (RA-2007)

Sample Received on : 01.06.2015

Date of Testing : 05.06.2015

Sl.No.	Size of Bricks in mm	Dry weight in gms	Wet weight in gms	Water Abosorption in %	Average Water Absorption in %	Allowable Water absorbtion as per IS: 1077:1992 Clause 7.2)
1	220x100x75	2945	3286	11.58	11.50	Not exceeding 20%
2	220x100x75	2953	3289	11.38		
3	220x100x75	2946	3283	11.44		
4	220x100x75	2938	3285	11.81		
5	220x100x75	2962	3296	11.28		

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T-2377

Job No.: CTCE/BBMP/W.No.18/BRM/CSR-06/865g/Bricks/2015-16 : 05.06.2015

TEST REPORT ON BRICKS

*** Customer** : **Asst. Executive Engineer,** J.C. Nagara Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. B.R. Manjunath,**
No. 486, New BEL Road, Bangalore - 54.

*** Name of the work** : Providing sanitary connection to the Public Toilet at Bulleward Park in Ward No. 18, BBMP, Bangalore.

Reference : EE/H/AE/WO/191/2012-13 Dated: 07.11.2012

Sample ID/Type of test : Bricks / Compressive Strength of Bricks

Technical Reference : IS: 3495(Part-1)- 1992 (RA-2007)

Sample Received on : 01.06.2015

Date of Testing : 05.06.2015

Sl.No.	Size of Bricks are in mm	Weight of Bricks in gms	Failure load in KN	Compressive Strength (N/mm^2)	Average Compressive Strength (N/mm^2)	Class Designation (As per IS: 1077:1992 Table 1)
1	220x100x75	3433.00	120.3	5.47	5.45	5.0
2	220x100x75	3435.00	118.3	5.38		
3	220x100x75	3493.00	119.5	5.43		
4	220x100x75	3502.00	120.3	5.47		
5	220x100x75	3493.00	121.5	5.52		

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Job No.: CTCE/BBMP/W.No.18/BRM/GSWPipe/2015-16

08.06.2015

TEST REPORT ON GLAZED STONEWARE PIPE

* Customer	:	**Asst. Executive Engineer,** J.C. Nagara Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. B.R. Manjunath,** No. 486, New BEL Road, Bangalore - 54.
* Name of work	:	Providing sanitary connection to the Public Toilet at Bulleward Park in Ward No. 18, BBMP, Bangalore.
* Reference	:	EE/H/AE/WO/191/2012-13 Dated: 07.11.2012
* Sample ID	:	Glazed Stoneware Pipe(150mm dia)SP-1 Class
Techinical Reference	:	IS-651:2007 (VI revision)
Date of Testing	:	08.06.2015

Sl no	Internal Diameter	Thickness of Pipe	% absorption	% of Acid Resistance	Crushing Strength kN/m
1	150mm	15mm	4.8	1.72	17.15
2	150mm	15mm	5.2	1.89	18.50
3	150mm	15mm	5.4	1.95	17.95
Requirements as per IS-651:2007(VI Revision)	**-----**	**----**	**Maximum 6%**	**Not Exceed 2.5%**	**Minimum 16kN/m**

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Job No.: CTCE/BBMP/W.No.18/BRM/CSR-06/865g/CUBE/2015-16 20.07.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** J.C. Nagara Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. B.R. Manjunath,**
No. 486, New BEL Road, Bangalore - 54.

*** Name of the work** : Providing sanitary connection to the Public Toilet at Bulleward Park in Ward No. 18, BBMP, Bangalore.

*** Reference** : EE/H/AE/WO/191/2012-13 Dated: 07.11.2012

*** Sample ID** : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{15}

Compressive Strength as on : 28th day

Sample Received on : 20.07.2015

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	22.06.2015	20.07.2015	8.132	365.7	16.25
2	22.06.2015	20.07.2015	8.295	378.6	16.83
3	22.06.2015	20.07.2015	8.338	389.4	17.31

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